

ABSTRACT OF THE DISCLOSURE

A technique classifies packets in a manner that enables the number of lookup operations performed when classifying a data packet to be reduced. A lookup operation is performed to identify a set of rules and a set of actions associated with the data packet. If
5 the action is the same for all the rules represented in the set of rules, the data packet is classified in accordance with the action and further lookup operations are not performed. Otherwise, a next-level lookup operation is performed and the process is repeated. This process continues for successive levels until either a level is reached where the packet is classified or a final level is reached. If a final level is reached, an action is performed
10 based on the results of the lookup operation at the final level.